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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEBASSI, AMANUEL

ART UNIT

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,751	Applicant(s) KRANNICH ET AL.	
	Examiner AMANUEL LEBASSI	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11 and 13-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11 and 13-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

The applicant argued features in the claims, i.e. method for estimating the position of a subscriber station in a radio communication system, comprising receiving reports from the subscriber station at a receive station providing coverage for a radio cell in which the subscriber station is located, each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station; storing the reports in a memory of the receive station of the radio communication system providing coverage for the radio cell in which the subscriber station is located; receiving a request for position estimation at the receive station of the radio communication system; and estimating the position at a position determining unit taking into account at least two reports stored prior to the request for position estimation reads upon Uebayashi in view of MacDonald.

Uebayashi is discussing a method where the location of the mobile station of a radio communication system is estimated. Thus Uebayashi shows the limitation of "**a method for estimating the location of a mobile subscriber**". Uebayashi is discussing where the mobile station transmits signal sequences where each report contains signal levels at the position of the subscriber sent by a transmitting mobile device. Thus Uebayashi shows the limitation of "**receiving reports from the subscriber station at a receive station providing coverage for a radio cell in which the subscriber**

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station is located, each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station and sent by a transmitting station." Uebayashi is discussing where position estimation reference signal from the mobile station is received through the antenna at the reception unit of the base station device. Thus Uebayashi shows the limitation of "**storing the reports in a memory of the receive station of the radio communication system providing coverage for the radio cell in which the subscriber station is located.**" Uebayashi discloses where a position check request signal is received which is to be used for location estimation. Therefore Uebayashi shows the limitation of "**receiving a request for position estimation at the receive station of the radio communication system.**" Uebayashi discloses where position is estimated taking in account using the signal sequences. Therefore Uebayashi shows the limitation of "**estimating the position at a position determining unit.**"

Uebayashi fails to disclose taking into account at least two reports. However, MacDonald shows taking into account at least two reports stored prior to the request for position estimation where comparison is made with at least two reported received signal strength values with at least two predetermined received strength values.

Regarding the applicants arguments on dependent claims limitations, those limitation where shown by Laiho-Steffens in view of MacDonald.

Regarding the applicants arguments on combination of references, all references were analogous and performing similar tasks and therefore are combinable.

Regarding the applicants argument on motivation, the motivation to combine was shown in the background of the secondary reference.

Therefore the argued features where read upon the cited references or are written broad enough that they read upon the cited references as follows.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-28 are rejected under 35 U.S.C. 103(a) as being unpatentable by Uebayashi et al. US 6181944 in view of MacDonald et al. US 20040152471.

Regarding claim 11, Uebayashi discloses a method for estimating the position of a subscriber station in a radio communication system (**abstract; where the location of the mobile station is estimated**). Uebayashi discloses receiving reports from the subscriber station at a receive station providing coverage for a radio cell in which the subscriber station is located (**col. 1, lines 63 – col. 2, line 3 where signal sequences are transmitted**), each report containing information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station (**col. 2, lines 1- 3; 9-23, where a reception unit for receiving a first signal sequence transmitted by a mobile station therefore a signal strength received at a**

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location of the subscriber station and col. 5, lines 9-16 where the mobile station transmits signal levels to a neighboring base station) and sent by a transmitting station **(col. 5, lines 9-16 where the mobile transmits transmission signals)**. Uebayashi discloses storing the reports in a memory of the receive station of the radio communication system providing coverage for a radio cell in which the subscriber station is located **(col. 6, lines 25-27 where position estimation reference signal from the mobile station is received through the antenna at the reception unit of the base station device)**. Uebayashi discloses receiving a request for position estimation at the receive station of the radio communication system **(col. 6, lines 25-45 where position estimation reference signal from the mobile station is received through the antenna at the reception unit of the base station device therefore receiving a request for position estimation at the receive base station)**. Uebayashi discloses estimating the position at a position determining unit taking into account at least two signal sequences stored prior to the request for position estimation **(col. 5, lines 35-55 where position is estimated taking in account using the signal sequences)**.

Uebayashi fails to disclose taking into account at least two reports. However MacDonald discloses taking into account at least two reports (paragraph [0014] and [0091] where comparison is made with at least two reported received signal strength values with at least two predetermined received strength values).

At the time of invention, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Uebayashi, and have it include taking into account at least two reports as disclosed by MacDonald. The motivation

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would have been in order to make more accurate position determinations as discusses by MacDonald (paragraph [0011]).

Regarding claim 13, Uebayashi teaches wherein the reports are received and/or stored regularly at specific time intervals (**Fig. 10**, where report is stored I time periods).

Regarding claim 14, MacDonald discloses wherein the reports are received and stored regularly at specific time intervals, and the reports are received and stored during both an active connection and in an idle mode (paragraph [0012]).

Regarding claim 15, MacDonald discloses wherein the memory stores a first number of reports as a maximum (paragraph [0046]).

Regarding claim 16, MacDonald discloses wherein the position determining unit requests a second number of reports from the network device (paragraph [0014]).

Regarding claim 17, MacDonald discloses wherein if the number of reports stored is fewer than the second number when the request for position estimation is received, then the receive station stores additional reports until the second number of reports has been stored or until a maximum period of time has expired (paragraph [0014]), if the second number of reports is stored before expiration of the maximum period of time, then the receive station sends the second number of reports prior to the

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expiry of the maximum period of time (paragraph [0091]), and if the second number of reports cannot be stored before expiration of the maximum period of time, then the base station sends all stored reports after the expiry of the maximum period of time, even if the number of stored reports remains smaller than the second number of reports (paragraph [0091]).

Regarding claim 18, MacDonald discloses wherein the position determining unit estimates position by comparing signal strengths obtained from the reports with signal strengths stored in a signal strength database (paragraph [0012]).

Regarding claim 19, MacDonald discloses wherein each report also contains information relating to a transmitting power used to transmit the at least one receive signal (paragraph [0091]).

Regarding claim 20, MacDonald discloses wherein the reports also contain: a transmitting power used by the subscriber station to transmit the report to the receive station (paragraph [0091]), and a receive power at which each report was received by the receive station in each case (paragraph [0112]).

Regarding claim 21, MacDonald discloses wherein the reports are received and stored regularly at specific time intervals, and the reports are received and stored during both an active connection and in an idle mode (paragraph [00120] and [0112]).

Regarding claim 22, MacDonald discloses wherein the memory stores a first number of reports as a maximum (paragraph [0046]).

Regarding claim 23, MacDonald discloses wherein the position determining unit requests a second number of reports from the network device (paragraph [0014]).

Regarding claim 24, MacDonald discloses wherein if the number of reports stored is fewer than the second number when the request for position estimation is received, then the receive station stores additional reports until the second number of reports has been stored or until a maximum period of time has expired (paragraph [0014]), if the second number of reports is stored before expiration of the maximum period of time, then the receive station sends the second number of reports prior to the expiry of the maximum period of time, and if the second number of reports cannot be stored before expiration of the maximum period of time (paragraph [0091]), then the base station sends all stored reports after the expiry of the maximum period of time, even if the number of stored reports remains smaller than the second number of reports (paragraph [0091]).

Regarding claim 25, MacDonald discloses wherein the position determining unit estimates position by comparing signal strengths obtained from the reports with signal strengths stored in a signal strength database (paragraph [0012]).

Regarding claim 26, MacDonald discloses wherein each report also contains information relating to a transmitting power used to transmit the at least one receive signal (paragraph [0091]).

Regarding claim 27, MacDonald discloses wherein the reports also contain: a transmitting power used by the subscriber station to transmit the report to the receive station (paragraph [0091]), and a receive power at which each report was received by the receive station in each case (paragraph [0112]).

Regarding claim 28, Uebayashi discloses a receive station for a radio communication system (abstract; radio network system **with BTS**). Uebayashi discloses a memory, for storing the reports, which the receive station providing coverage for a radio cell in which the subscriber station is located has received from the subscriber station (**col. 1, lines 63 – col. 2, line 3 where signal sequences are transmitted and stored in the Base Station**)), in which the reports in each case contain information relating to a signal strength at a location of the subscriber station of at least one receive signal received by the subscriber station (**col. 2, lines 1- 3; 9-23, where a reception unit for receiving a first signal sequence transmitted by a mobile station therefore a signal strength received at a location of the subscriber station and col. 5, lines 9-16 where the mobile station transmits signal levels to a neighboring base station**) and sent by a transmitting station (**col. 5, lines 9-16 where the mobile transmits transmission signals**). Uebayashi discloses a transmitter to transmit, after a request for

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position estimation has been received at the receive station of the radio communication system (**col. 6, lines 25-45 where position estimation reference signal from the mobile station is received through the antenna at the reception unit of the base station device therefore receiving a request for position estimation at the receive base station**), at least two signal sequences stored prior to receiving the request for position estimation, the reports being transmitted to a position determining unit, in which the position is estimated taking into account the at least two sequences and a controller to control the receive station so that at least two signal sequences are stored prior to the request for position estimation (**col. 5, lines 35-55 where position is estimated taking in account using the signal sequences**)

Uebayashi fails to disclose taking into account at least two reports. However MacDonald discloses taking into account at least two reports (paragraph [0014] and [0091] where comparison is made with at least two reported received signal strength values with at least two predetermined received strength values).

At the time of invention, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Uebayashi, and have it include taking into account at least two reports as disclosed by MacDonald. The motivation would have been in order to make more accurate position determinations as discusses by MacDonald (paragraph [0011]).

Conclusion

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3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Amanuel Lebassi, whose telephone number is (571) 270-5303. The Examiner can normally be reached on Monday-Thursday from 8:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nick Corsaro can be reached at (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Amanuel Lebassi

/A. L/

02172009

/NICK CORSARO/

Supervisory Patent Examiner, Art Unit 2617